VOLUME CONTENTS

1992 NUMBER 1

Yu. D. Vinitskii and **Yu. G. Shakaryan**	1	Large frequency-controlled drives for auxiliaries at thermal power plants
G. V. Roshchin, L. V. Sysoeva, V. K. Fokin and **V. I. Filatov**	13	Three-phase hybrid analogue power system simulator for studies in electrical power engineering
A. B. Vasil'ev and **A. I. Lur'e**	23	Calculation of the magnetic field and electrodynamic resistance strength of transformers for magnetic surge currents
A. G. Levit, O. N. Grechko and **N. P. Shchipunova**	35	Examination of ageing of the insulation in a new concept of acceptance tests for high-voltage power transformers and apparatus
P. A. Butyrin and **A. A. Grishkevich**	41	Minimum structures of mathematical models for electric circuits
P. F. Merabishvili and **G. V. Vadachkoriya**	56	Transient analysis of circuits with single-phase rectifier bridges for a sine-wave input current
M. L. Kostyrev and **A. N. Shtanov**	67	Mathematical simulation of a thyristor-controlled induction generator
B. I. Grinshtein and **Yu. G. Tolstov**	76	Network voltage phase control with a static phase-shifter
Luo Yanyu, Deng Weilin, Gu Qiuxin and **Liú Zhuo**	87	An expert system for analysing the state and developing trends of a controlled power system
Yu. V. Abramkin	95	Calculating electromagnetic forces in a non-linear magnetic system from their volume density
V. A. Popov, S. B. Losev and **E. T. Kushkova**	116	Achieving symmetry in open-phase operating conditions of 500 kV transmission systems
O. A. Shlegel'	123	Graphic representation of relationships between basic electromagnetic field equations
	132	List of papers not translated from *Elektrichestvo* Nos 1–3 1992

1992 NUMBER 2

M. I. Baranov	1	Calculation of energy release in cylindrical conductors of high-voltage electrophysical systems
V. Z. Annenkov, A. P. Belyakov and **S. Yu. Vereshchinskii**	9	The dependence of soil resistivity on electrical field intensity
I. V. Yakimets, V. G. Narovlyanskii and **L. S. Fleishman**	21	Induction-type current-limiters with magnetic flux commutation
G. P. Kazanchyan, A. P. Kazanchyan, M. S. Gasparyan and **S. F. Likakh**	31	Calculation of optimum barrier arrangement in polymer insulation of high-voltage cables

Yu. A. Fominykh, Yu. A. Sokovishin, V. N. Osotov, D. S. Maslennikov, A. G. Konstantinov, M. E. Parylis and A. M. Greditor	37	Temperature distribution over the surface of rectangular busbars used in electrical installations
Yu. S. Zhelezko	43	A strategy for reducing losses and improving the quality of electrical energy in power networks
A. A. Stavinskii	57	Induction motors with electrical steel laminations of multiplanar structure
V. N. Usikhin	69	Application of similarity theory in the design of systems for in-plant industrial power supply
V. Yu. Kizilov	77	Symmetrical component filters using microelectronic circuits
D. V. Vilesov and A. E. Bondarenko	85	Assessing the quality of the supply voltage in three-phase systems
I. V. Litkens, N. G. Filippova and S. G. Otmorskii	93	Possible causes of prolonged electromechanical oscillations in a power system
I. V. Yakimets, V. G. Narovlyanskii and V. M. Matveikin	105	Selecting the parameters for magnetic energy storage in a power system
I. M. Bortnik, E. K. Vol'pov and A. A. Filippov	121	A method for calculating electrical fields including transients in HVDC apparatus
V. I. Popov and V. A. Rozhdestvenskii	131	Computer-aided design of developed diagrams for polyphase machine windings
V. O. Sarkisyan	139	A simplified method for assessing induction motor heating
	147	List of papers not translated from *Elektrichestvo* Nos 4–6 1992

1992 NUMBER 3

Yu. N. Astakhov, V. A. Labuntsov, A. G. Ter-Gazaryan, I. V. Yakimets, O. V. Dudkevich, I. Z. Gluskin, S. V. Neikirkh, N. L. Novikov and V. K. Khalevin	1	Prospects for using superconducting storage in electrical power systems
A. A. Glazunov, V. P. Kavchenkov and I. N. Pykhtina	13	Optimization of fault current levels in 6–20 kV networks using probability characteristics
Ye. A. Ivliyev	19	Calculation of the electrical parameters of earth rods
Yu. B. Kazakov, Yu. I. Stradomskii and Yu. A. Shchelykalov	27	Analysis of the meridian-plane magnetic field in permanent magnet systems by the finite-element method
V. S. Sinev	37	A generalized description of multi-winding transformer circuits
V. Kh. Ishkin, G. V. Mikutskii and Yu. P. Shkarin	47	Transmission line carrier communication in power systems
A. V. Netushil	57	The electromechanical effect of Huber and its development
V. G. Fisenko, V. V. Yerin and S. V. Shatskii	65	Analysis of electromagnetic forces in the tooth zone of electrical machines

I. Ye. Koroteyev and **V. V. Perekrest**	73	Analysis of stability "in the overall sense" of direct current voltage pulse converters with pulse-width modulation
V. S. Baushev and **Zh. T. Zhusubaliyev**	85	Indeterminable states of a voltage regulator with pulse-width control
Ye. A. Ivliyev and **Yu. Ya. Iossel'**	99	Calculation of the electrical parameters of cathodic protection systems for reservoirs
V. L. Nevel'skii, M. A. Edlin and **Yu. P. Surin**	111	Special operating conditions at power stations
P. I. Bartolomei and **N. I. Grudinin**	127	Power system operational control taking account of frequency regulation
E. M. Bazelyan, A. V. Khlapov and **A. V. Shkilev**	137	Development of a surge discharge over water and earth surfaces
A. V. Kotel'nikov and **A. B. Kosarev**	149	The electromagnetic influence of a.c. traction networks on metal service lines
	169	List of papers not translated from *Elektrichestvo* Nos 7–9 1992

1992 NUMBER 4

L. I. Dorozhko and **V. M. Sorokin**	1	Controlled electrical reactors for power systems
A. M. Aizen and **A. S. Vyskirka**	9	Calculation of the continuous admissible load current for self-supporting insulated conductors
M. I. Baranov and **N. N. Bondina**	19	Electromagnetic and thermal transients in cylindrical conductors due to lightning current strikes
G. Ya. Mikhal'chenko and **V. D. Semenov**	33	Modulation switching converters of electrical energy
G. V. Nosov	49	Equivalent parameters of massive conductors allowing for their heating in the steady state with periodic currents
G. N. Lysyak and **A. V. Danilyuk**	55	Modelling the steady state of alternating current/direct current power systems using generalized independent variables
K. I. Seryakov	69	Dynamic condensation — the cause of reduced interrupting capacity of SF_6 circuit breakers at low temperatures
M. A. Shakirov	81	Matrix-heuristic equivalent circuits for complex electrical networks
L. V. Pivovarov	95	Eddy-current converter with internal compensation
V. A. Tsvetkov	107	A mathematical model for analysis of generator reliability, including development of defects
G. N. Aleksandrov and **A. I. Afanas'yev**	113	Influence of electrode shape on the long-term electrical strength of air gaps for a power frequency voltage
V. I. Zhilyakov and **V. G. Dryuchin**	125	Synthesis of systems for controlling the operating conditions in electric power systems
A. P. Golovanov	135	Optimization of the operating conditions in a power pool

V. L. Shper 143 Modified methods for calculating the temperature of power semiconductor devices under varying conditions. Part 1

V. I. Tsukanov and **N. A. Serikhin** 161 Mathematical modelling of electromechanical transients in a linear stepping motor

Ye. P. Afinogenov, V. S. Komel'kov and **P. P. Malyushevskii** 169 Generation of directed shock waves through powerful pulsed discharges in a liquid

S. T. Tolmachev and **Zh. G. Rozhnenko** 179 Reciprocity principle for a magnetic medium without hysteresis

185 List of papers not translated from *Elektrichestvo* Nos 10–12 1992

i Volume Contents/Author Index to the 1992 volume